

Title (en)

HARDFACING MATERIALS INCLUDING PCD PARTICLES, WELDING RODS AND EARTH-BORING TOOLS INCLUDING SUCH MATERIALS, AND METHODS OF FORMING AND USING SAME

Title (de)

AUFSCHWEISSUNGSMATERIALIEN MIT PCD-PARTIKELN, SCHWEISSSTANGEN UND ERDBOHRWERKZEUGE MIT SOLCHEN MATERIALIEN SOWIE VERFAHREN ZU IHRER BILDUNG UND VERWENDUNG

Title (fr)

MATERIAUX DE SURFAÇAGE COMPRENANT DES PARTICULES DE DIAMANT POLYCRISTALLIN (PCD), BAGUETTES DE SOUDURE ET OUTILS DE FORAGE COMPRENANT DE TELS MATERIAUX ET PROCEDES DE FABRICATION ET D'UTILISATION ASSOCIES

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Application

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Priority

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Abstract (en)

[origin: WO2011003051A2] Hardfacing materials include particles of polycrystalline diamond (PCD) material embedded within a matrix material. The PCD particles comprise a plurality of inter-bonded diamond grains. Material compositions and structures used to apply a hardfacing material to an earth-boring tool (e.g., welding rods) include PCD particles. Earth-boring tools include a hardfacing material comprising PCD particles embedded within a matrix material on at least a portion of a surface of a body of the tools. Methods of forming a hardfacing material include subjecting diamond grains to elevated temperatures and pressures to form diamond-to-diamond bonds between the diamond grains and form a PCD material. The PCD material is broken down to form PCD particles that include a plurality of inter-bonded diamond grains. Methods of hardfacing tools include bonding PCD particles to surfaces of the tools using a metal matrix material.

IPC 8 full level

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